WHAT IS CLAIMED IS:

Sub B17

1. A video encoding apparatus for encoding a video image comprising:

a first feature amount computing device configured to compute a statistical feature amount for each frame of the video image by analyzing an input video signal representing the video image;

a scene dividing device configured to divide the video image into a plurality of scenes each including a frame or continuous frames in accordance with the statistical feature amount;

a second feature amount computing device configured to compute an average feature amount for each of the senses using the feature amount obtained by the first feature amount computing device;

a scene selector configured to select a part of the scenes or all of the scenes;

an encoding parameter generator configured to generate an encoding parameter including at least an optimum frame rate and quantization step size for each of the scenes using the feature amount of the scene selected by the scene selector; and

an encoder configured to encode the input video signal in accordance with the encoding parameter generated for each of the scenes by the encoding parameter generator.

2. An apparatus according to claim 1, wherein

the scene selector is configured to select the scenes in accordance with operation information obtained by editing performed by an user.

3. An apparatus according to claim 2, which includes a scene content providing device configured to provide feature of each of the scenes to the user.

4. An apparatus according to claim 3, wherein the scene content providing device provides a key-frame of each scene or a thumb nail thereof to the user.

5. An Apparatus according to claim 3, wherein the scene content providing device provides a symbol indicating the feature amount or feature obtained for each scene by the second feature amount computing device to the user.

6. An apparatus according to claim 3, wherein the scene content providing device provides a key-frame of each scene or a thumb nail thereof and a symbol indicating the feature amount or feature obtained for each scene by the second feature amount computing device to the user.

7. An apparatus according to claim 1, wherein the feature amount includes at least some of the number of motion vectors, distribution, norm size, residual error after motion compensation, and variance of luminance and chrominance.

8. A video encoding method comprising:

computing a statistical feature amount every frame

by analyzing an input video signal;

dividing a video image into scenes each formed of a frame or continuous frames in accordance with the statistical feature amount;

computing an average feature amount for each of the senses, using the statistical feature amount;

selecting a part of the scenes or all of the scenes;

generating an encoding parameter including at least an optimum frame rate and quantization step size for each of the scenes, using the feature amount of each scene selected; and

encoding the input video signal in accordance with the encoding parameter generated for each of the scenes.

9. A method according to claim 8, wherein the scene selecting step selects the scenes in editing performed by an user.

10. A method according to claim 9, which includes providing feature of each of the scenes to the user.

11. A method according to claim 10, wherein the scene content providing step provides a key-frame of each scene or a thumb nail thereof to the user.

12. A method according to claim 10, wherein the scene content providing step provides a symbol indicating the feature amount or feature obtained for each scene to the user.

13. A method according to claim 10, wherein the scene content providing device provides a key-frame of each scene or a thumb nail thereof and a symbol indicating the feature amount or feature obtained for each scene to the user.

14. A computer program stored on a computer readable medium, comprising:

instruction means for instructing a computer to compute a statistical feature amount every frame by analyzing an input video signal;

instruction means for instructing the computer to divide a video image into scenes each formed of a frame or continuous frames in accordance with the statistical feature amount;

instruction means for instructing the computer to compute an average feature amount for each of the senses, using the statistical feature amount;

instruction means for instructing the computer to select a part of the scenes or all of the scenes;

instruction means for instructing the computer to generate an encoding parameter including at least an optimum frame rate and quantization step size for each of the scenes, using the feature amount of each scene selected; and

instruction means for instructing the computer to encode the input video signal in accordance with the encoding parameter generated for each of the scenes.